

The “Interior Renovation Company” System

Project Description:

The Interior Renovation Company System aims to streamline and automate the process of handling customer orders for interior renovation projects. The system involves multiple employees and steps to ensure a smooth and efficient workflow.

Customers begin by placing an order and filling in the necessary details for their interior renovation project. They also have the option to choose from different contract options available: “Credit” and “One-time”. The system captures and stores this information for further processing.

Upon order placement, the system triggers the Accountant to generate the appropriate contract based on the customer's selected contract option. The Accountant prepares the contract, outlining the terms and conditions of the payment agreement.

The contract is then sent to the Customer for review and signature. Once the Customer reviews and signs the contract, indicating their agreement with the terms, the system changes the status to “signed” and proceeds to the next step. If the Customer refuses the contract or does not make a decision within 3 days, then the contract will get the status “cancelled”.

After the contract is signed, the system facilitates the payment process. The Customer chooses from available options including payment by “Card” or by “Bank transfer”.

If the Customer opts for a bank transfer, the system waits for 3 business days for the transfer to be processed. If the transfer does not arrive within the specified timeframe, the order automatically gets the status “cancelled”. On the other hand, if the Customer chooses to pay with a credit card, the system verifies the payment immediately.

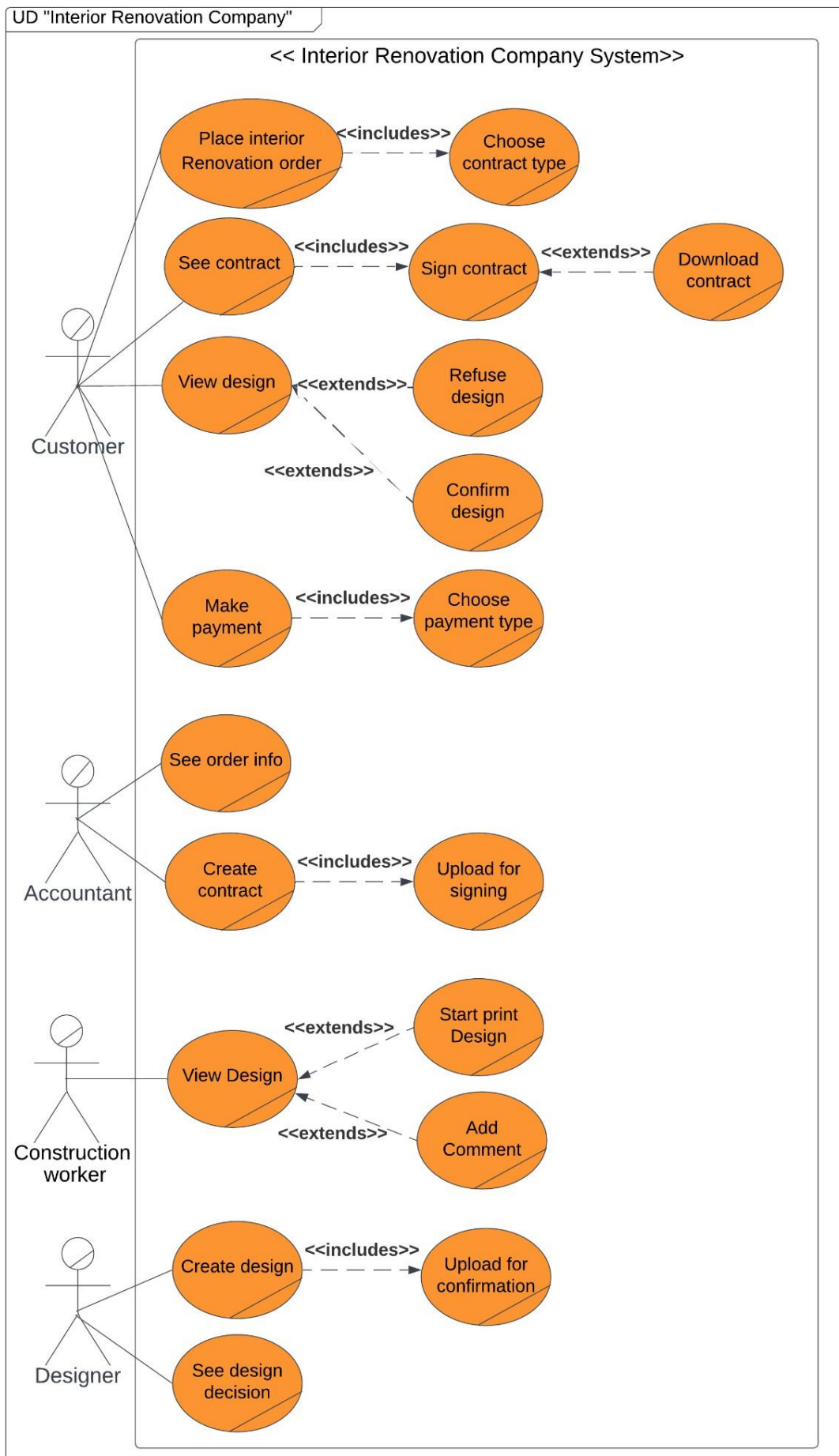
In the event of an unsuccessful payment, the system allows the Customer to revisit the payment method selection. However, if the payment is successful, the system changes the status to “confirmed” and forwards the order to the designing step.

The system assigns the order to the Designer, where a designer is responsible for producing a design based on the Customer's requirements. Once the design is completed, it is forwarded to the customer for approval. The Customer can refuse the design and the Designer will produce a new design again; or if the design was confirmed, then the system forwards the order to construction step.

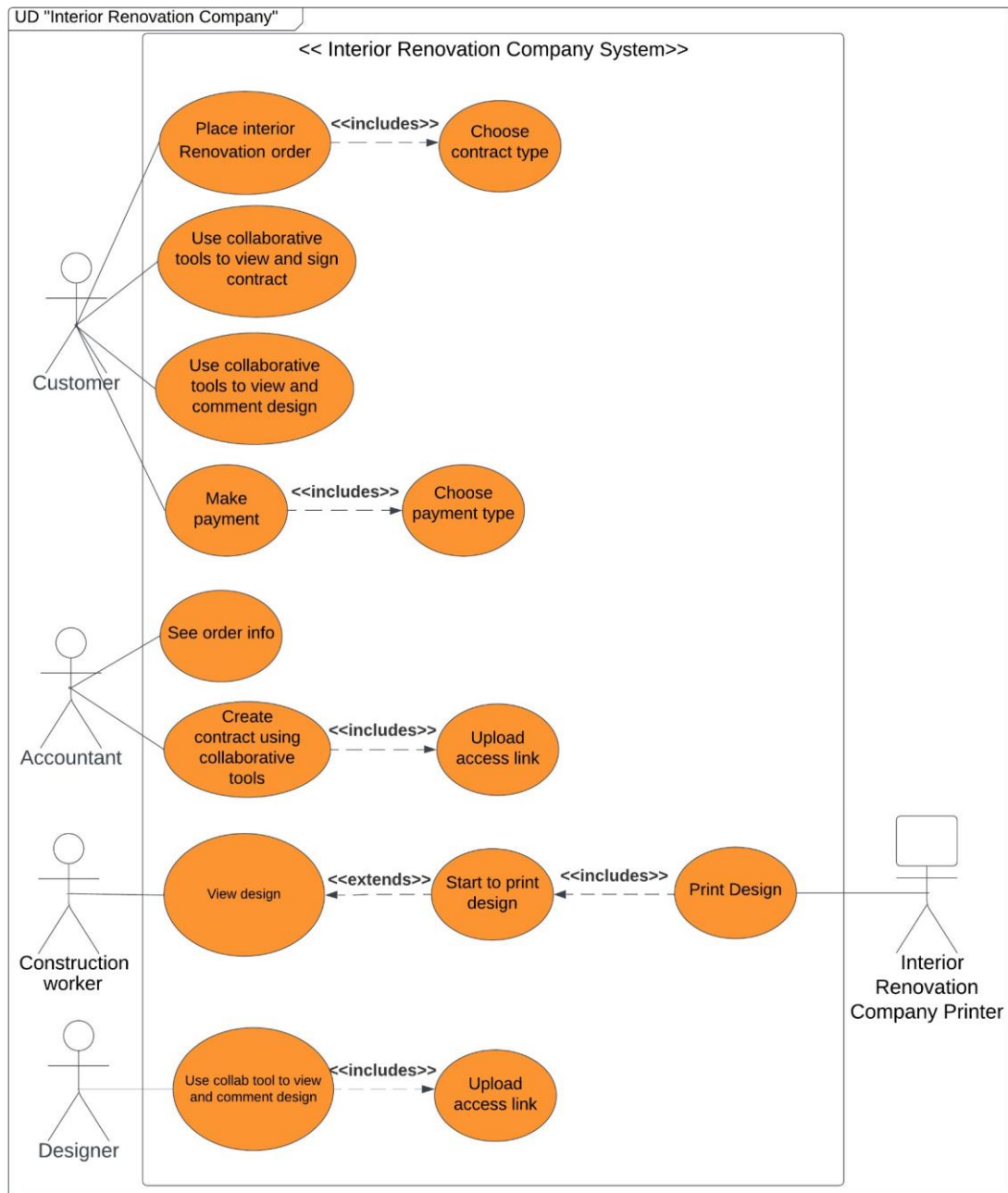
The Construction worker implements the approved design and carries out the actual renovation work. When the renovation is finished, the status of order is changed to “completed” and the notification is sent to the Customer.

Throughout the entire process, effective communication channels are established between the departments involved to ensure a cohesive workflow and timely progress updates.

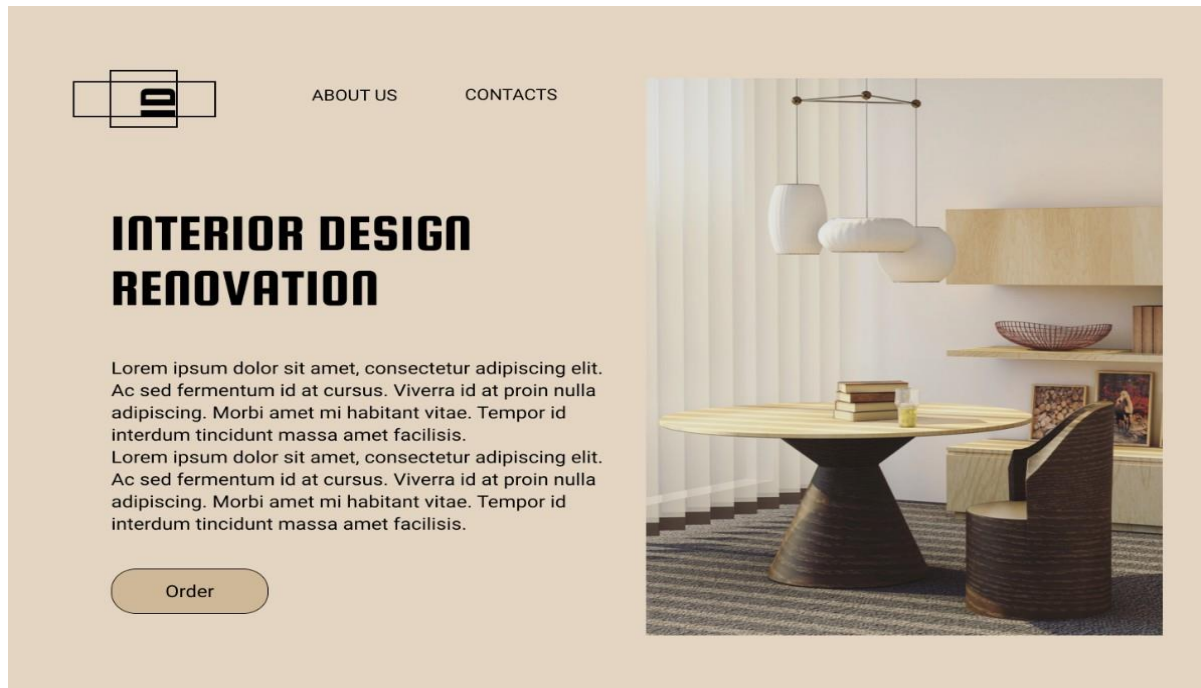
Business Use Case Diagram:



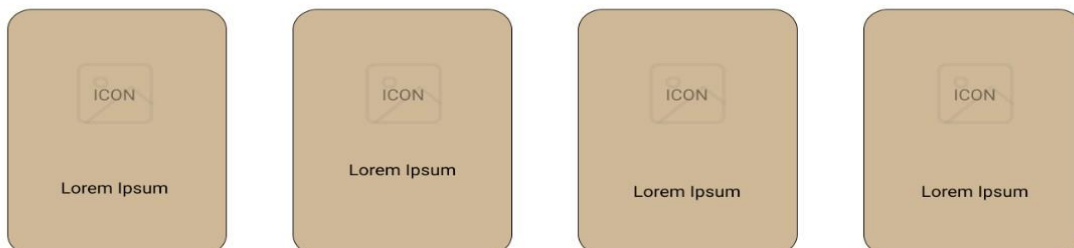
Business Use Case Diagram Automated:



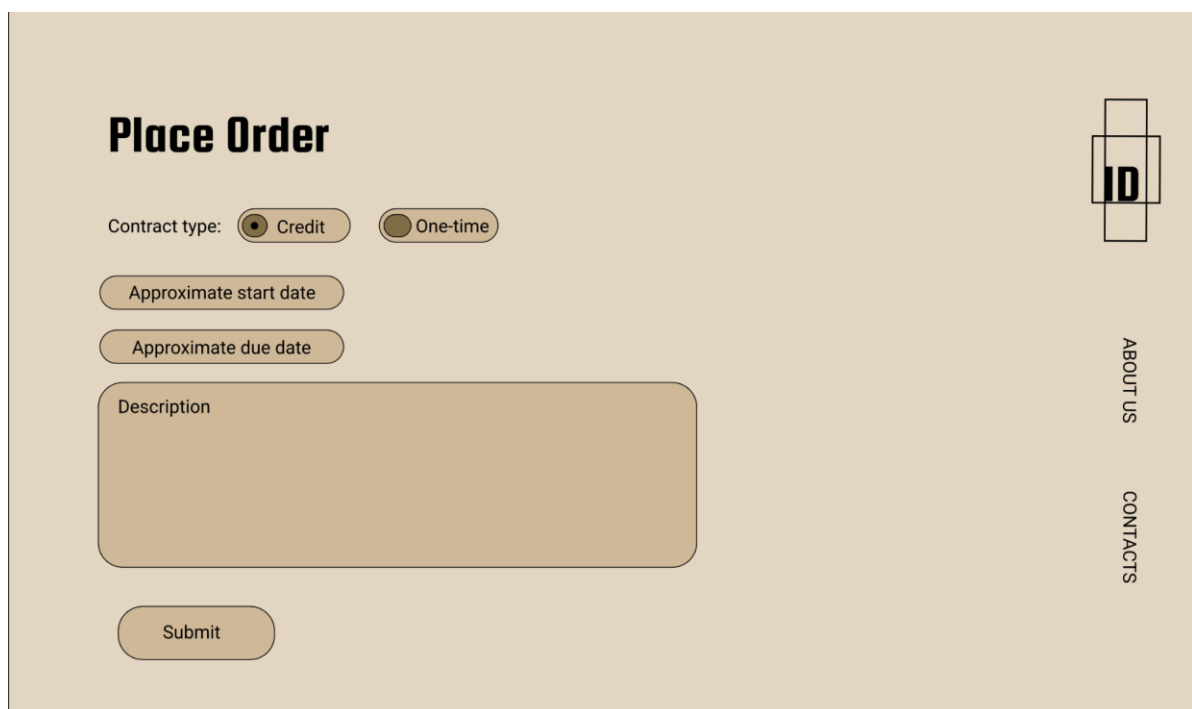
Figma Prototype: Landing Page



About Us



Customer's Screens:



Choose Payment Method

☒ Transfer to a bank account

Fake Company Name:
Witkowska sp. p. P.P.O.F
Company EIN:
06-5971119

Bank:
SUMMIT BANK
Bank Account Number:
PL92330139776627125137639859
Routing Number:
121138958
IBAN:
PL32798050275335010171364235

☐ Pay by debit/credit card



ABOUT US

CONTACTS

Choose Payment Method

☐ Transfer to a bank account

☒ Pay by debit/credit card

1234 5678 1234 5678

Valid Thru

11/25

cvc

345

Submit



ABOUT US

CONTACTS

Accountant's and Designer's Screen:

The interface is a wireframe for a web application, likely for accountants and designers. It consists of a main content area and a right sidebar.

Main Content Area:

- Order 1902940 - one term**
A text input field containing the URL: <https://www.figma.com/file/YG2Yk3ozxB4eznWD2vnfMj/Untitled?type=design&node-id=14%3A82&t=mhZylucm1Coxi1hX-1>
- Order 1902937 - credit plan**
A text input field containing the URL: <https://www.figma.com/file/YG2Yk3ozxB4eznWD2vnfMj/Untitled?type=design&node-id=14%3A82&t=mhZylucm1Coxi1hX-1>
A **save** button is located to the right of the input field.
- Order 1902430 - credit plan**
A text input field is present but empty.

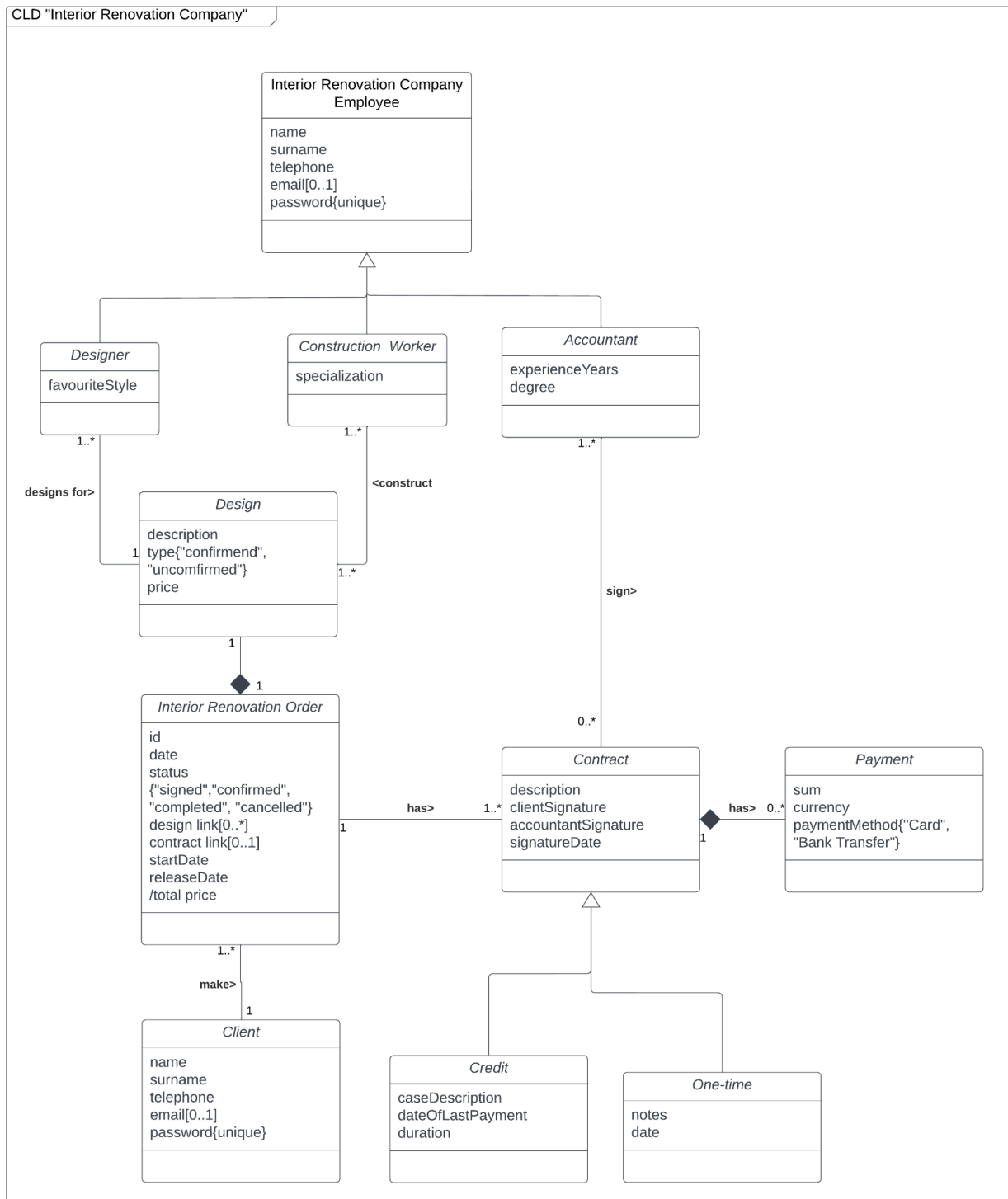
Right Sidebar:

- ID**: A logo consisting of the letters 'ID' inside a square frame.
- ABOUT US**: A navigation link.
- CONTACTS**: A navigation link.

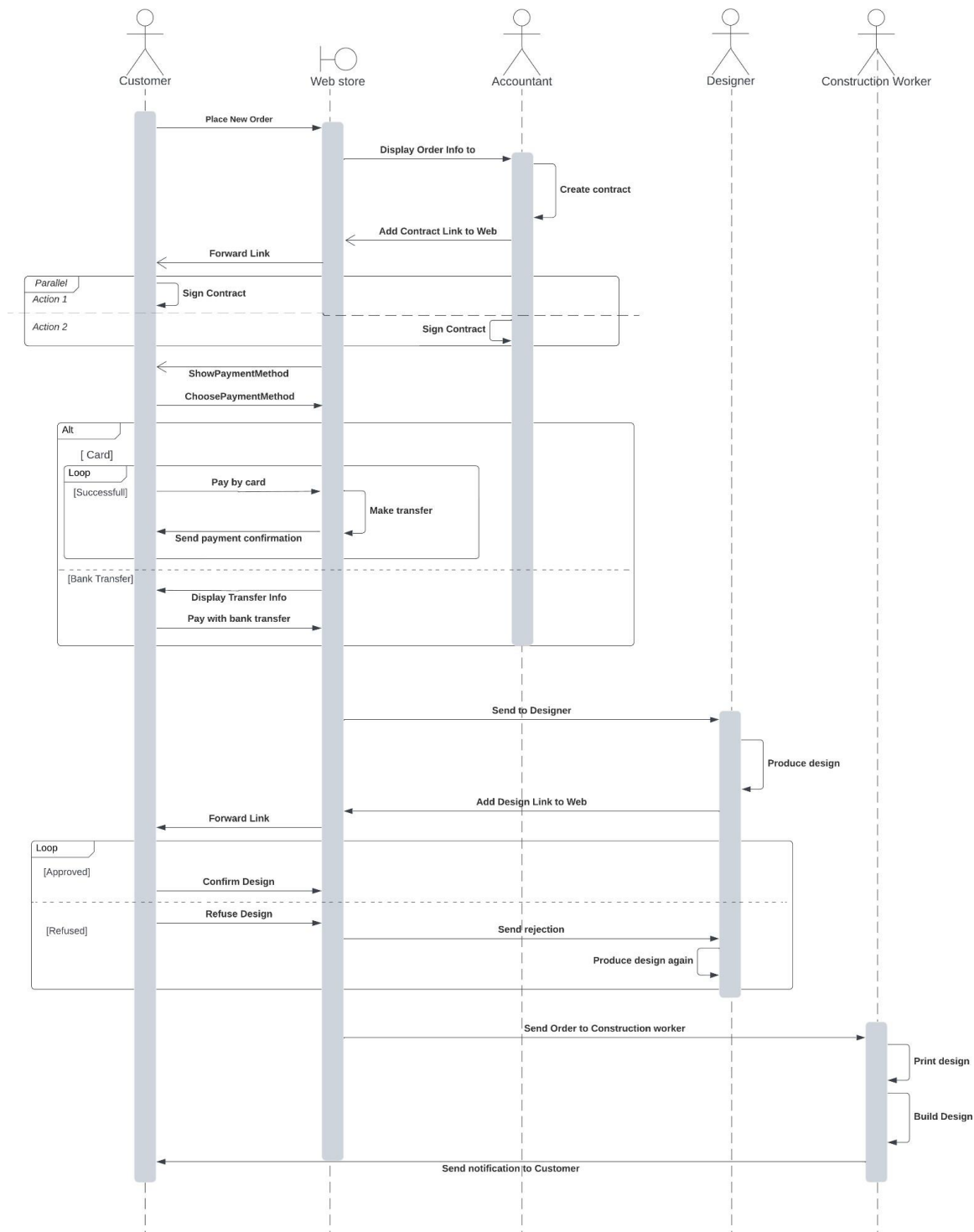
Construction Worker's Screen:



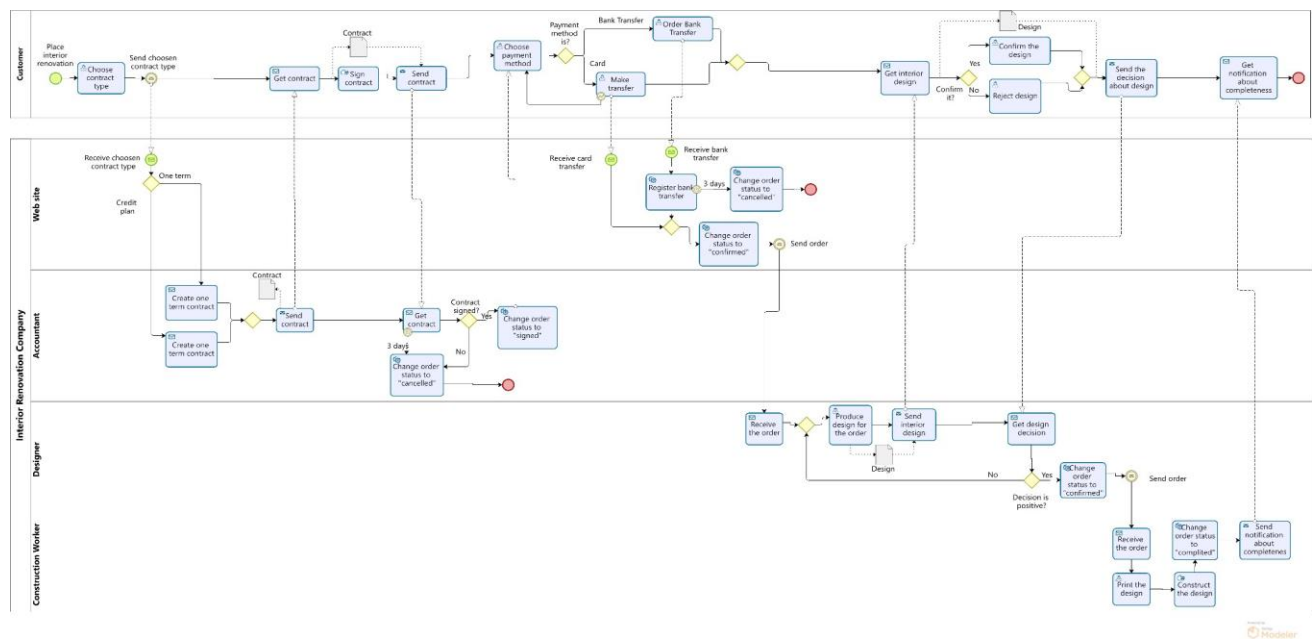
Class Diagram:



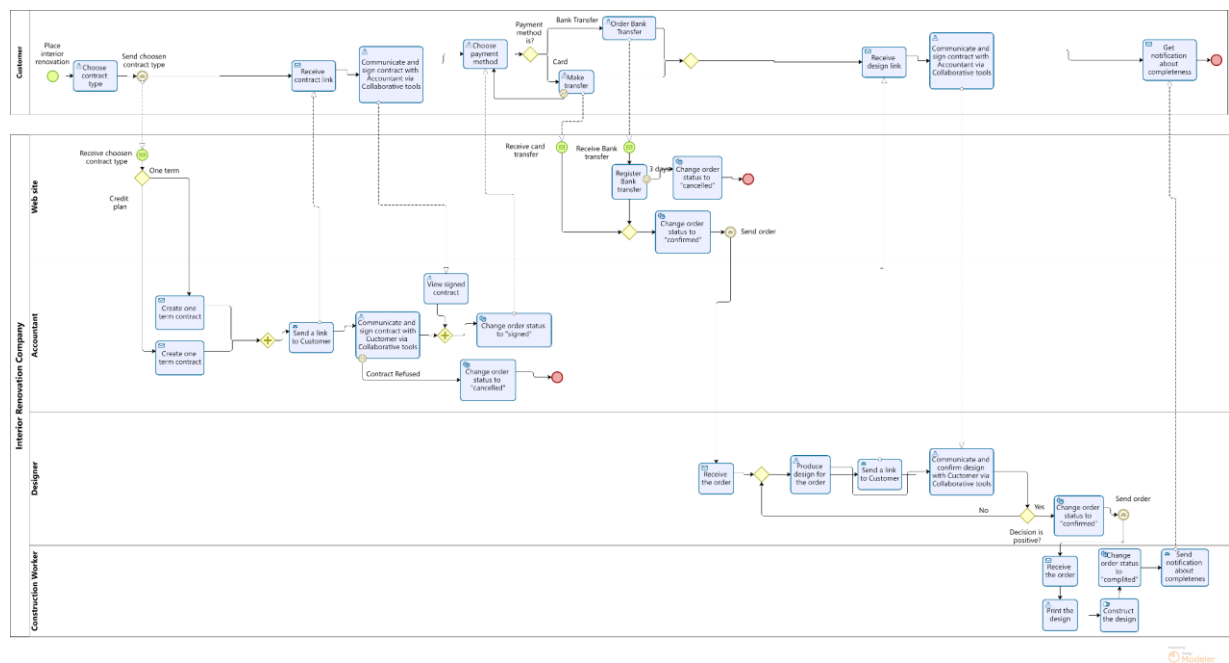
Sequence Diagram:



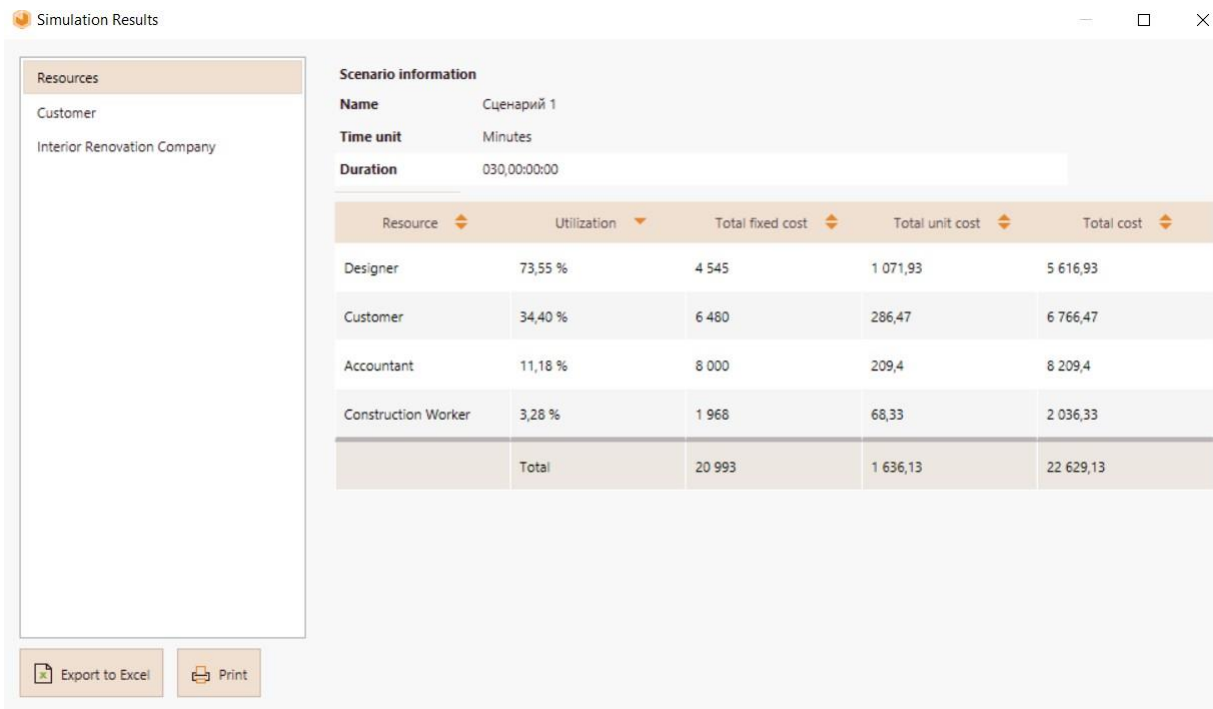
BPMN Diagram:



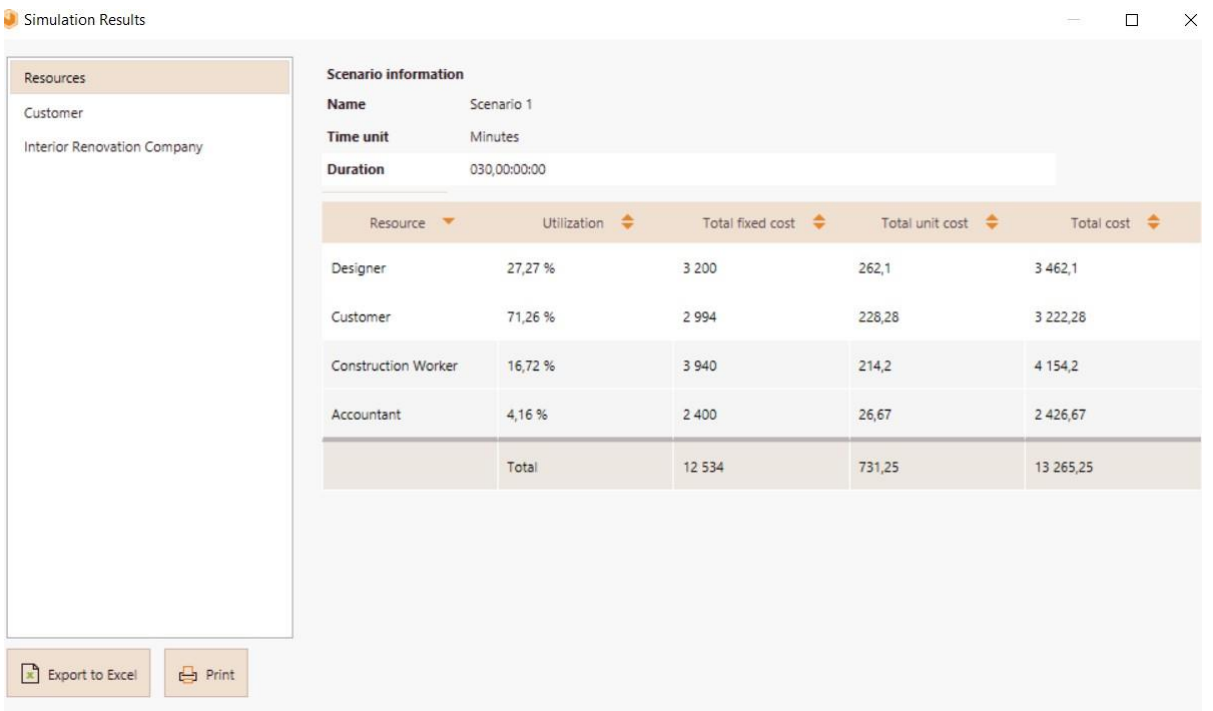
BPMN Automated Diagram:



Simulation Before Automatization:



Simulation After Automatization:



Conclusion:

The automated process has reduced costs by improving resource utilisation and eliminating fixed and unit costs in certain areas.

In the original process, the Accountant had the total cost with a utilisation rate of 11.18%. However, in the improved process, the Accountant's utilisation rate has been reduced to 4.16%, resulting in a large reduction in its fixed and unit costs. This means that the company has significant savings.

Similarly, the Designer has also seen a notable improvement in cost reduction. Previously, it had a utilisation rate of 73.5%, with considerable fixed and unit costs. However, in the improved process, the Designer's utilisation rate has been reduced to 27.27%, reducing all its fixed and unit costs. As a result, the company has significant savings here too.

The Construction worker, on the other hand, has maintained its high utilisation rate in the improved process, reaching 16.72%. Although the total cost did not rise.

Overall, the improved process has successfully optimised resource utilisation, leading to significant cost reductions. By eliminating costs associated with the Accountant and the Designer, the company has saved a total of 13 265,25 PLN, contributing to improved financial efficiency and profitability.